

### LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended): An isolated nucleic acid variant encoding a polypeptide comprising an amino acid sequence [selected from the group consisting of SEQ ID NO:93-155] as set forth in SEQ ID NO.:111, wherein the amino acid sequence contains at least one amino acid change which results from a single nucleotide polymorphism selected from the group consisting of SEQ ID NOS.: 5956, 5959 to 5960, 5969 to 5971, 5973, 5776, 5979, 5981, and 5983.

2. (currently amended): An isolated nucleic acid variant encoding a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:111, wherein the amino acid sequence contains at least one amino acid change which results from a single nucleotide polymorphism set forth in SEQ ID NO.: 5969 [selected from the group consisting of:

- a) SEQ ID NO:111;
- b) SEQ ID NO:120;
- c) SEQ ID NO:121; and
- d) SEQ ID NO:153].

3. (currently amended): An isolated nucleic acid variant encoding at least 7 contiguous amino acids of the amino acid sequence according to claim 1, wherein the contiguous amino acids are not present in the amino acid sequence set forth by SEQ ID NO:111.

4. (currently amended): An isolated nucleic acid variant encoding at least 7 contiguous amino acids of the amino acid sequence according to claim 2, wherein the contiguous amino acids are not present in the amino acid sequence set forth by SEQ ID NO:111.

5. (currently amended): An isolated nucleic acid variant comprising a nucleotide sequence as set forth in SEQ ID NO.:19, wherein the nucleotide sequence contains at least one single nucleotide polymorphism selected from the group consisting of SEQ ID NOS.: 5955 to 5984 [selected from the group consisting of:

- a) SEQ ID NO:1-92;
- b) SEQ ID NO:156-693;
- c) SEQ ID NO:694-979;
- d) SEQ ID NO:980 to SEQ ID NO:1766; and
- e) SEQ ID NO:1767 to SEQ ID NO:4687].

6. (currently amended): An isolated nucleic acid variant comprising a nucleotide sequence as set forth in SEQ ID NO.:19, wherein the nucleotide sequence contains at least one single nucleotide polymorphism selected from the group consisting of SEQ ID NOS.: 5955, 5957 to 5958, 5961 to 5969, 5972, 5974 to 5975, 5977 to 5978, 5980, 5982, and 5984 [selected from the group consisting of:

- a) SEQ ID NO:19;
- b) SEQ ID NO:31;
- c) SEQ ID NO:32; and
- d) SEQ ID NO:90].

7. (original): An isolated nucleic acid comprising a nucleotide sequence which is 90% identical to the nucleotide sequence according to claim 5.

8. (original): An isolated nucleic acid comprising a nucleotide sequence which is 90% identical to the nucleotide sequence according to claim 6.

9. (currently amended): An isolated nucleic acid comprising at least 15 contiguous nucleotides of the nucleotide sequence according to claim 5, wherein the contiguous nucleotides are not present in SEQ ID NO.:19.

10. (currently amended): An isolated nucleic acid comprising at least 15 contiguous nucleotides of the nucleotide sequence according to claim 6, wherein the contiguous nucleotides are not present in SEQ ID NO.:19.

11. (original): An isolated nucleic acid comprising a nucleotide sequence which is complementary to the nucleotide sequence of the nucleic acid according to claim 9.

12. (original): An isolated nucleic acid comprising a nucleotide sequence which is complementary to the nucleotide sequence of the nucleic acid according to claim 10.

13. (original): A vector comprising the nucleic acid according to claim 3.

14. (original): A vector comprising the nucleic acid according to claim 4.

15. (original): A vector comprising the nucleic acid according to claim 9.

16. (original): A vector comprising the nucleic acid according to claim 10.

17. (original): A host cell comprising the vector according to claim 13, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

18. (original): A host cell comprising the vector according to claim 14, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

19. (original): A host cell comprising the vector according to claim 15, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

20. (original): A host cell comprising the vector according to claim 16, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

21-30 cancelled.

31. (original): A pharmaceutical composition comprising the nucleic acid according to claim 11, and a physiologically acceptable carrier, excipient, or diluent.

32. (original): A pharmaceutical composition comprising the nucleic acid according to claim 12, and a physiologically acceptable carrier, excipient, or diluent.

33. (original): A pharmaceutical composition comprising the vector according to claim 13, and a physiologically acceptable carrier, excipient, or diluent.

34. (original): A pharmaceutical composition comprising the vector according to claim 14, and a physiologically acceptable carrier, excipient, or diluent.

35. (original): A pharmaceutical composition comprising the vector according to claim 15, and a physiologically acceptable carrier, excipient, or diluent.

36. (original): A pharmaceutical composition comprising the vector according to claim 16, and a physiologically acceptable carrier, excipient, or diluent.

37-40 cancelled.

41. (currently amended): An isolated nucleic acid variant comprising a nucleotide sequence set forth in SEQ ID NO.:19, wherein the nucleotide sequence contains at least one single nucleotide polymorphism set forth in SEQ ID NO.:5969. [selected from the group consisting of:

- a) SEQ ID NO:1 to SEQ ID NO:5;
- b) SEQ ID NO:17 to SEQ ID NO:18;

- c) SEQ ID NO:19;
- d) SEQ ID NO:20;
- e) SEQ ID NO:31 to SEQ ID NO:32;
- f) SEQ ID NO:36 to SEQ ID NO:37;
- g) SEQ ID NO:43 to SEQ ID NO:44;
- h) SEQ ID NO:74;
- i) SEQ ID NO:76;
- j) SEQ ID NO:80 to SEQ ID NO:81;
- k) SEQ ID NO:90; which contains at least one single nucleotide

polymorphism set forth in Table 10.]

42. (currently amended): An isolated nucleic acid variant comprising at least 15 contiguous nucleotides of a nucleotide sequence set forth in SEQ ID NO.:5969, wherein the contiguous nucleotides are not present in SEQ ID NO.:19. [selected from the group consisting of:

- a) SEQ ID NO:1 to SEQ ID NO:5;
- b) SEQ ID NO:17 to SEQ ID NO:18;
- c) SEQ ID NO:19;
- d) SEQ ID NO:20;
- e) SEQ ID NO:31 to SEQ ID NO:32;
- f) SEQ ID NO:36 to SEQ ID NO:37;
- g) SEQ ID NO:43 to SEQ ID NO:44;
- h) SEQ ID NO:74;
- i) SEQ ID NO:76;
- j) SEQ ID NO:80 to SEQ ID NO:81;
- k) SEQ ID NO:90; which contains at least one single nucleotide

polymorphism set forth in Table 10.]

43. (currently amended): An isolated nucleic acid variant comprising at least 15 contiguous nucleotides of a nucleotide sequence set forth in SEQ ID NO:[16]19, which contains at least one single nucleotide polymorphism selected from the group

consisting of [SNP E 2]SEQ ID NO.:5960, [SNP H 1]SEQ ID NO.:5969, [SNP F -2]SEQ IDNO.:5964, [SNP O 1]SEQ IDNO.:5979, [SNP O 6]SEQ IDNO.:5984, [SNP M 1]SEQ IDNO.:5976, and [SNP M +1]SEQ IDNO.:5974, wherein the contiguous nucleotides are not present in SEQ ID NO.:19.

44-45 cancelled.

46. (original): An isolated nucleic acid comprising a nucleotide sequence that is complementary to the nucleotide sequence of the nucleic acid according to claim 42.

47-55 cancelled.

56. (original): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 9; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.

57. (original): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 11; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.

58. (original): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 42; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.

59. (original): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 46; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.

60-95 cancelled.

96. (original): An isolated antisense nucleic acid comprising the nucleotide sequence according to claim 11.

97. (original): An isolated antisense nucleic acid comprising the nucleotide sequence according to claim 12.

98. (original): An isolated antisense nucleic acid comprising the nucleotide sequence according to claim 46.

99-111 cancelled.

112. (new): A vector comprising the nucleic acid according to claim 42.

113. (new): A vector comprising the nucleic acid according to claim 1.

114. (new): A vector comprising the nucleic acid according to claim 2.

115. (new): A vector comprising the nucleic acid according to claim 5.

116. (new): A vector comprising the nucleic acid according to claim 6.

117. (new): A vector comprising the nucleic acid according to claim 41.

118. (new): A host cell comprising the vector according to claim 112, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

119. (new): A host cell comprising the vector according to claim 113, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

120. (new): A host cell comprising the vector according to claim 114, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

121. (new): A host cell comprising the vector according to claim 115, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

122. (new): A host cell comprising the vector according to claim 116, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

123. (new): A host cell comprising the vector according to claim 117, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

124. (new): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 10; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.

125. (new): A kit for detecting a 12q23-qter nucleotide sequence comprising:  
a) the isolated nucleic acid according to claim 12; and  
b) at least one component to detect hybridization of the isolated nucleic acid to a 12q23-qter nucleotide sequence.